

## **Informal Working Group 4**

### **DRAFT PRELIMINARY VIEWS ON WRC-07 Agenda Item 1.6**

**Agenda Item 1.6:** *to consider additional allocations for the aeronautical mobile (R) service in parts of the bands between 108 MHz and 6 GHz, in accordance with Resolution **414 (WRC-03)** and, to study current satellite frequency allocations, that will support the modernization of civil aviation telecommunication systems, taking into account Resolution **415 (WRC-03)**;*

**NOTE:**        **IWG-4** is responsible for Resolution **414** portion of AI 1.6.  
                  **IWG-2** is responsible for Resolution **415** portion of AI 1.6

This IWG-4 Preliminary View addresses Resolution **414** only.

**ISSUES & EFFORTS:** Resolution 414 of this agenda item addresses several issues and efforts:

1.        **ISSUE:** That the current aeronautical mobile band 117.975-137 MHz will become saturated in some areas of the world and will no longer be able to support increasing and/or new requirements.
2.        **ISSUE:** That any allocation changes in the band 108-117.975 MHz shall place no additional constraints on the broadcasting service or cause harmful interference to stations of the broadcasting service operating in the band 87-108 MHz in the U.S. RR 5.43 does not apply to systems identified in recognizing (d) of Resolution 413.
3.        **EFFORT:** That Res. **114 (Rev.WRC-03)** and Res. **413 (WRC-03)**, call for compatibility studies in the relevant aeronautical bands.
4.        **EFFORT:** To determine if additional allocations for aeronautical mobile (route) service (AM(R)S) are necessary and/or should be made in the frequency range 108 MHz to 6 GHz:
  - a. to consider adding AM(R)S allocations to existing aeronautical bands; and
  - b. if step a. is not sufficient, to consider adding AM(R)S allocations to bands that are not currently used by aviation.

5. **EFFORT:** To specifically consider how to accommodate the requirements for aeronautical systems in the band 5 091-5 150 MHz.

**BACKGROUND:** Efforts addressed in Res. 414 in this agenda item are:

1. To investigate the bands currently available for use by aeronautical systems in the frequency range between 108 MHz and 6 GHz in order to determine whether additional allocations to the aeronautical mobile (R) service are required and can be accommodated in these bands without placing undue constraints to services to which the frequency bands are currently allocated;
2. To further investigate, in case the first step above would not lead to satisfactory results, also the frequency bands currently not available for use by aeronautical systems, subject to not constraining the existing and planned use of such bands, taking account of existing use and future requirements in these bands;
3. To investigate how to accommodate the requirements for aeronautical systems in the band 5 091-5 150 MHz,

**DISCUSSION:**

1. At WRC-03 an additional allocation (5.197A) for the 108-117.975 MHz ARNS band was enacted. That allocation, for AM(R)S limited to systems that transmit navigational information in support of air navigation and surveillance functions in accordance with recognized international aviation standards, required that such use be in accordance with Resolution 413 (WRC-03). Resolution 413 addressed the need for studies between aeronautical and broadcast services to address compatibility issues that might arise from the introduction of new systems in either service.
2. WRC-03 identified the need for studies to consider how to accommodate the requirements for aeronautical systems in the band 5 091-5 150 MHz. Although this might be considered a subset of the first effort, as most proposed applications for this frequency band would fit under AM(R)S, the scope of this effort is broader in that aeronautical fixed links are also being considered to allow transmission of aeronautical sensor data on the airport property without requiring costly underground cable installation.

**U.S. VIEWS:** With regard to Resolution 414 (WRC-03):

1. The U.S. views that current aviation communication bands are severely congested. In addition, recent experience has shown that evolving technology for navigation and surveillance functions may necessitate allocations that are more encompassing than simply the aeronautical radionavigation service (ARNS). As a result, the U.S. anticipates supporting the addition of AM(R)S allocations in some frequency bands depending on the results of ITU-R studies. The U.S. view is also to maintain compatibility with services in adjacent bands. In particular, the U.S. is of the view that any allocation changes in the 108-117.975 MHz band must be compatible with terrestrial broadcasting systems and place no additional constraints on the broadcasting service in the band 87-108 MHz in the United States.
2. In case the first step above would not lead to satisfactory results, the U.S. supports further investigation of frequency bands currently not available for use by aeronautical systems, subject to not

constraining the existing and planned use of such bands, taking account of existing use and future requirements in these bands.

3. The U.S. views that investigation may be necessary to determine how to accommodate the requirements for aeronautical systems in the band 5 091-5 150 MHz, including the possibility of fixed service links limited to aeronautical applications at airports. In this regard the United States will seek to ensure that the operations of the existing FSS consistent with 5.444A are taken into account.  
(November 1, 2004)